AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A voice coding apparatus comprising:

a spectrum quantization circuit for calculating and quantizing a spectrum parameter of a voice signal;

an adaptive code book circuit for predicting said voice signal from a sound source signal to calculate a residual;

a sound source quantization circuit for quantizing said sound source signal by using said spectrum parameter to output the quantized sound source signal;

a gain quantization circuit for quantizing a gain of said sound source signal;

a mode decision circuit for extracting characteristics from said voice signal to decide a mode; and

a multiplexer unit for multiplexing an output from said spectrum parameter quantization circuit, an output from said mode decision circuit, an output from said adaptive code book circuit, an output from said sound source quantization circuit, and an output from said gain quantization circuit to output the multiplexed result,

characterized in that:

when the output from said mode decision circuit [[unit]] represents a predetermined mode, said sound source signal is represented by a combination of a plurality of pulses ~~and the~~ wherein an amplitude or polarity of the pulse is calculated from said voice signal; and

said sound source quantization unit selects a shift amount and a code vector, which minimize distortion between an input signal and a reproduced signal, from combinations of a plurality of shift amounts by which the pulses shift and gain code vectors.

2. (Original) The voice coding apparatus according to claim 1, characterized in that the positions of the pulses the number of which is predetermined are arranged at predetermined intervals, and a plurality of shift amounts for shifting the positions of the pulses as a whole are determined.

3. (Original) The voice coding apparatus according to claim 1, characterized in that the combinations of the positions of the pulses the number of which is predetermined are generated at random, and the plurality of combinations are determined.

4. (Currently Amended) A voice decoding apparatus characterized by comprising:

a demultiplexer unit which receives information related to a spectrum parameter, information related to a decision signal, information related to an adaptive code book, and information related to a sound source signal to separate the pieces of information from each other;

a sound source signal generation unit ~~for, when the decision signal represents a predetermined mode, generating~~ adapted to generate a sound source signal from an adaptive code vector, a shift amount of a pulse position ~~representing a sound source signal~~, and a gain code vector when the decision signal represents a predetermined mode; and

a synthesis filter unit which receives the sound source signal constituted by a spectrum parameter to output a reproduced signal.

5. (Currently Amended) A voice decoding apparatus characterized by comprising:

a demultiplexer unit which receives information related to a spectrum parameter, information related to a decision signal, information related to an adaptive code book, and information related to a sound source signal to separate the pieces of information from each other;

a sound source signal generation unit ~~for, when the decision signal represents a specific mode, generating~~ adapted to generate positions of pulses representing sound source signals at random and generating a sound source signal by using an adaptive code vector and a gain code vector when the decision signal represents a specific mode; and

a synthesis filter unit which receives the sound source signal constituted by a spectrum parameter to output a reproduced signal.